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DT-6085

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT: Dieter Husar

SERIAL NO.: 10/046,522

FILED: January 14, 2002

FOR: Device for Handling Liquid Samples . . .

EXAMINER: Lyle Alexander

GROUP: 1743

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir:

Pursuant to 37 CFR sections 1.97 and 1.98, applicant respectfully requests that the documents listed on the attached form PTO-1449, be made of record and considered in connection with the examination of this application. Copies of the listed documents are enclosed. A translation of the foreign language document(s) is not readily available.

The documents submitted herewith were cited during prosecution of a German application corresponding to the above-referenced application.

06/28/2005 EAREGAY1 00000074 500955 10046522

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U.S. Patents Nos. 4,775,515; 5,500,187; 6,120,736; 6,117,395; 6,280,148; and 6,686,208 correspond to German documents DE 3739046, DE 4341862, 19507638, 19524795, 197 06513, and 19711281 cited by the German Patent Office.

Brief description of other German language documents follows.

European Patent Publication EP 0 725267 discloses an electrically controlled micro-pipette that handles fluids with or without microparticle content, in volumes between a few hundred pico litres and several micro litres. The arrangement includes microejection pump with microengineered chamber (7). Its elastic wall (14) is controlled by an electrical actuator (12) forming a micromembrane pump. Its pipette tip has a microdischarge capillary (4). It is initially filled with a fluid which is inert under the conditions of use. Fluids are taken in spontaneously or under pump suction. Droplets are delivered in constant size and known number, the rate of delivery controlled by electrical signal frequency. Further micropumps may be added for precision adjustment and washing purposes. A metallised tip forms an electrical immersion sensor, used in extraction.

German Patent DE 69303898 T2 (based on European Patent EP 0637998B1)

discloses devices for detecting the presence of a preselected analyte in a fluid sample. The devices comprise a substrate microfabricated to define a sample inlet port (16), and a mesoscale flow system that includes a sample flow channel (20) extending from the inlet port. The mesoscale flow system further includes an analyte detection region (22) in fluid communication with the flow channel (20) comprised of a binding moiety for specifically binding the analyte. The detection region is constructed with a mesoscale dimension sufficiently small to enhance binding of the binding moiety and the analyte. The binding moiety may be immobilized in the detection region. The mesoscale detection systems of the invention may be used in a wide range of applications, including the detection of cells or macromolecules, or for monitoring reactions or cell culture growth.

German Patent DE 69303483T2 (based on European Patent EP 0639223B1)

discloses devices for detecting the presence of a preselected analyte in a fluid sample. The devices comprise a substrate microfabricated to define a sample inlet port (16), and a mesoscale flow system that includes a sample flow channel (20) extending from the inlet port. The mesoscale flow system further includes an analyte detection region (22) in fluid communication with the flow channel (20)

comprised of a binding moiety for specifically binding the analyte. The detection region is constructed with a mesoscale dimension sufficiently small to enhance binding of the binding moiety and the analyte. The binding moiety may be immobilized in the detection region. The mesoscale detection systems of the invention may be used in a wide range of applications, including the detection of cells or macromolecules, or for monitoring reactions or cell culture growth.

German Utility Model DE 29801523U1 discloses a micropipette or an actuator having at least 1 capillary channel (1), formed by microstructuring in a substrate (2) such as of glass, to form a covered gutter. It is connected at one side to a pressure chamber (3), which has a controlled electric heater (4) as a thin-layer heating resistance (4) in the outer wall of a stiff membrane (31) forming the pressure chamber (3). A heat sink (5) is at the connection between the capillary channel (1) and the pressure chamber (3). The capillary channel (1) accommodates a liquid column (6) or a plunger.

Wolfgang Ehrfeld et al., "Use Potentials for Chemical and Biological Microreactors", Chemie Ingenieur Technik, Vol. 69 (1997), pp. 931-934, discloses different uses of a microreactor.

The Commissioner is hereby authorized to charge the fee required under 37 CFR §§ 1.17(p) in the amount of \$180 and any further fees which may be required, or credit any overpayment to our Deposit Account No. 50-0955.

Respectfully submitted,

Alexander Zinchuk

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Reg. No. 30,541

Dated: June 24, 2005

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail and addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June 24, 2005.

Alexander Zinchuk

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Form PTO-1449

INFORMATION DISCLOSURE  
CITATION IN AN APPLICATION

Docket No.: DT-6085

Serial No.: 10/046,522

Applicant(s): Dieter Husar

Filing Date: January 14, 2002

Group: 1743

## U.S. PATENT DOCUMENTS



		Document Number								Date	Name	Class	Subclass	Filing Date if appropriate
	AA	3	6	2	0	6	7	6		11/1971	David			
	AB	3	7	9	9	7	4	2		3/1974	Coleman			
	AC	4	7	7	5	5	1	5		10/1988	Cottingham			
	AD	5	5	0	0	1	8	7		3/1996	Deoms et al.			
	AE	5	5	0	4	0	1	1		4/1996	Gavin et al.			
	AF	6	1	1	7	3	9	5		9/2000	Plough et al.			
	AG	6	2	8	0	1	4	8		8/2001	Zengerle et al.			
	AH	6	6	8	6	2	0	8		2/2004	Meusel et al.			
	AI	6	1	2	0	7	3	6		9/2000	Plough et al.			
	AJ													
	AK													

## FOREIGN PATENT DOCUMENTS

		Document Number								Date	COUNTRY	Class	Subclass	TRANSLATION	
														YES	NO
	AL	9	6	0	0	6	1	4		1/1996	PCT				
	AM	9	6	1	4	9	3	4		5/1996	PCT				
	AN	9	7	0	4	2	9	7		2/1997	PCT				
	AO	9	7	4	4	1	3	2		11/1997	PCT				
	AP	9	8	0	5	4	2	4		2/1998	PCT				
	AQ	9	9	3	5	5	8	4		1/1999	PCT				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	AR	Wolfgang Ehrfeld et al., "Use Potentials for Chemical & Biological Microreactors," Chemie Ingenieur Technik, Vol. 69 (1997) 931-934
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EXAMINER

DATE CONSIDERED

<b>Form PTO-1449</b>  INFORMATION DISCLOSURE CITATION IN AN APPLICATION		Docket No.: DT-6085		Serial No.: 10/046,522			
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<b>U.S. PATENT DOCUMENTS</b>							
Exam. Init.	Document Number	Date	Name	Class	Subclass	Filing Date if appropriate	
AA							
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<b>FOREIGN PATENT DOCUMENTS</b>							
		Document Number	Date	COUNTRY	Class	Subclass	TRANSLATION YES NO
	ALL	0 5 4 5 2 8 4	6/1993	EPO			
	AMM	0 7 2 5 2 6 7	8/1996	EPO			X
	ANN	0 8 0 3 2 8 8	10/1997	EPO			
	AOO	0 8 9 7 7 5 0	2/1999	EPO			
	APP	0 9 0 3 1 8 0	3/1999	EPO			
	AQQ	9 3 0 3 8 9 8	2/1995	Germany			X
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
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		Document Number	Date	Name	Class	Subclass	Filing Date if appropriate
	AB						
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<b>FOREIGN PATENT DOCUMENTS</b>							
		Document Number	Date	COUNTRY	Class	Subclass	TRANSLATION YES      NO
	ALL <sup>1</sup>	9 3 0 3 4 8 3	2/1995	Germany			X
	AMM <sup>1</sup>	9 8 0 1 5 2 3	6/1998	Germany			X
	AN						
	AO						
	AP						
	AQ						
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